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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RADTKE, MARK A	

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/647,997	SRINIVASAN ET AL.	
	Examiner	Art Unit	
	Mark A. Radtke	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/25/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12 and 25 recite the limitation "processing unit" in line 4. There is insufficient antecedent basis for this limitation in the claim.

3. Claims 13 and 26 recite the limitation “restarting loading” in lines 2 and 3, respectively. It is not clear to one of ordinary skill in the relevant art how the program can “restart loading” when there is no mention of “stopping loading” in any part of the claims. It appears that the claims are intended to provide error-handling in the case of an application failure, but that is not clear in the claims as written.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 14 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Paragraph [0093] of the

specification ("Additional Implementation Details") recites "the article of manufacture in which the code is implemented may comprise a transmission media, such as a network transmission line, wireless transmission media, signals propagating through space, radio waves, infrared signals, etc." A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter. (Shell Development Co. v. Watson, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), aff'd, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5, 7-8, 12, 14-15, 18, 20-21, 25, 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox (U.S. Patent Application Publication US 2002/0112224 A1, Application Number 09/773,196).

As to claim 1, Cox teaches a method for loading input data in one or more hierarchical format input files into a data store (see Abstract), comprising:

performing parallel processing of one or more input files to output data (See Figure 4, element 42. See also paragraph [0041], line 3 – paragraph [0042], line 3. A thread is started for each input file. Threads are executed in parallel.); and

serially loading the data into the data store while enforcing the order of the data in the one or more input files (See Figure 4, element 46. See also paragraph [0045]. The order of data remains intact because queues are First-In-First-Out data structures and the files are read from beginning to end).

As to claims 2, 15 and 28, Cox teaches further comprising:

receiving a physical input file (see figure 4, element 41 and paragraph [0041], lines 3-7); and

logically dividing the physical input file into multiple sections, wherein each of the multiple sections is an input file (see paragraph [0057]).

As to claims 5 and 18, Cox teaches wherein serially loading the data further comprises: loading the data without generating SQL commands (See paragraph [0045], lines 1-2, "API commands". API commands can include function calls to a Dynamic Link Library via ODBC).

As to claims 7 and 20, Cox teaches wherein the parallel processing is performed by two or more row mappers (See paragraphs [0045] and [0053], where "row mapper" is read on "Operator").

As to claim 8, Cox teaches a method for loading input data in one or more hierarchical format input files into a data store (see Abstract), comprising:

under control of a master row mapper (See paragraph [0052], lines 1-4, where "master row mapper" is read on "Loader"),

invoking one or more slave row mappers, wherein the slave row mappers perform processing in parallel with the master row mapper and with each other (See paragraphs [0045] and [0053], where "slave row mapper" is read on "Operator");

processing data in a first input file (see paragraph [0045]); and

serially loading the processed data and data in one or more spillfiles into the data store (See Figure 4, element 46. See also paragraph [0045], where "spillfile" is read on "SQL Queue"); and

under control of each of the slave row mappers,

processing data in a separate input file (see paragraph [0041], line 3 – paragraph [0042], line 3); and

storing results of the processing in a corresponding spillfile (See Figure 4, element 46. See also paragraph [0045], where "spillfile" is read on "SQL Queue").

As to claims 12 and 25, Cox teaches wherein each of the one or more input files is a section, further comprising:

under control of the master row mapper and each of the slave row mappers, during processing of a current section, at the end of each processing unit,

determining that processing has crossed into a next section; and

continuing to process data in the next section (See paragraph [0057], lines 8-9. By "processing the next element", it is implicit that a determination "that processing has crossed into the next section" has been made. If the processing has crossed into the next section, then the thread will terminate and the operating system will perform a context switch and load the thread for the next section. See also paragraph [0042]).

As to claim 14, Cox teaches an article of manufacture including a program for loading input data in one or more hierarchical format input files into a data store, wherein the program causes operations to be performed (see Abstract), the operations comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 21, Cox teaches an article of manufacture including a program for loading input data in one or more hierarchical format input files into a data store, wherein the program causes operations to be performed (see Abstract), the operations comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 8 above.

As to claim 27, Cox teaches a computer system having at least one program for loading input data in one or more hierarchical format input files into a data store (see Abstract), comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Reeder (U.S. Patent 5,852,812).

As to claims 6 and 19, Cox teaches wherein the data from each of the input files is appended to a separate temporary storage location (see Figure 4, element 46).

Cox does not teach wherein the operations further comprise:

when serial loading is interrupted, restarting the serial loading using the data in the separate temporary storage locations without reprocessing the one or more input files.

Reeder teaches wherein the operations further comprise:

when serial loading is interrupted, restarting the serial loading using the data in the separate temporary storage locations without reprocessing the one or more input files (See Figure 9, steps 700-706 and column 14, line 65 – column 15, line2. The "processing" of Reeder takes place in earlier steps. See figure 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Cox by the teaching of Reeder for the benefit of handling common errors which may occur in transactional systems.

10. Claims 3, 9-11, 16, 22-24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Kloos et al. (U.S. Patent 6,556,999).

As to claims 3, 16 and 29, Cox teaches performing processing of a first section from the multiple sections under control of a first row mapper and logically dividing the physical input file (see Examiner's comments regarding claim 2).

Cox does not teach determining that there has been an error and continuing processing of a next section from the multiple sections that is also being processed by a second row mapper; and notifying the second row mapper to terminate processing of the next section.

Kloos et al. teaches determining that there has been an error (see column 40, lines 54-63, where "in processing" is read on "with the data retrieved from the RDE product") and continuing processing of a next section from the multiple sections that is

also being processed by a second row mapper (see column 40, lines 61-63); and notifying the second row mapper to terminate processing of the next section (see column 40, lines 54-63).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Cox by the teaching of Kloos et al. for the benefit of enabling manual error correction (see Kloos et al., column 40, lines 60-61, "until the problem is corrected").

As to claims 9 and 22, Cox teaches a master row mapper (see Examiner's comments regarding claim 8).

Cox does not teach determining that there has been an error in processing the data in at least one input file; and

terminating the slave row mappers.

Kloos et al. teaches determining that there has been an error in processing the data in at least one input file (see column 40, lines 54-63, where "in processing" is read on "with the data retrieved from the RDE product"); and

terminating the slave row mappers (see column 40, lines 54-63).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Cox by the teaching of Kloos et al. for the benefit of enabling manual error correction (see column 40, lines 60-61, "until the problem is corrected").

As to claims 10 and 23, Cox teaches a master row mapper (see Examiner's comments regarding claim 8).

Cox does not teach determining that there has been an error in loading the processed data in at least one input file; and

terminating the slave row mappers.

Kloos et al. teaches determining that there has been an error in loading the processed data in at least one input file (see column 40, lines 54-63, where "in loading" is read on "during loading of that data into the O/C database"); and

terminating the slave row mappers (see column 40, lines 54-63).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Cox by the teaching of Kloos et al. for the benefit of enabling manual error correction (see column 40, lines 60-61, "until the problem is corrected").

As to claims 11 and 24, Cox teaches slave row mappers (see Examiner's comments regarding claim 8).

Cox does not teach determining that there has been an error in processing the data in at least one input file; and

terminating each of the other slave row mappers processing a separate input file whose order follows the separate input file being processed by the slave row mapper that determined that there has been an error.

Kloos et al. teaches determining that there has been an error in processing the data in at least one input file (see column 40, lines 54-63, where "in processing" is read on "with the data retrieved from the RDE product"); and

terminating each of the other slave row mappers processing a separate input file whose order follows the separate input file being processed by the slave row mapper that determined that there has been an error (see column 40, lines 60-61, "causing further loads of data from that front-end site 104 to be disabled").

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Cox by the teaching of Kloos et al. for the benefit of enabling manual error correction (see column 40, lines 60-61, "until the problem is corrected").

11. Claims 4, 17 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Kloos et al., and further in view of Holenstein et al. (U.S. Patent 7,003,531).

As to claims 4, 17 and 30, Cox, as modified, teaches wherein the data from each of the input files is appended to a separate temporary storage location (see Cox, paragraph [0057], where "temporary storage location" is read on "hashtable").

Cox, as modified, still does not teach deleting the temporary storage location into which the second row mapper was appending the data from the processing of the next section.

Holenstein et al. teaches deleting the temporary storage location into which the second row mapper was appending the data from the processing of the next section (see column 12, lines 55-57).

Therefore, it would have been obvious at the time the invention was made to have modified Cox by the teaching of Holenstein et al. for the benefit of handling common errors which may occur in transactional systems.

12. Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Holenstein et al.

As to claims 13 and 26, Cox does not teach further comprising:

when restarting loading of the processed data, skipping a specified number of rows in at least one of the input files.

Holenstein et al. teaches further comprising:

when restarting loading of the processed data, skipping a specified number of rows in at least one of the input files (see column 20, lines 5-13).

Therefore, it would have been obvious at the time the invention was made to have modified Cox, as modified, by the teaching of Holenstein et al. for the benefit of handling common errors which may occur in transactional systems.

Additional References

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to database importing in general:

Patent/Pub. No.	Issued to	Cited for teaching
EP 1225516 A1	JAHNKE, JOERG et al.	RDBMS import from XML
US 6965903 B1	Agarwal; Nipun et al.	RDBMS import from XML
US 6947950 B2	Murthy; Ravi et al.	RDBMS import from XML
US 6996571 B2	McConnell; Christopher Clayton	Parallel and serial aspects of data importation
US 6151624 A	Teare; Keith et al.	Row mapping

Conclusion

14. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr
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17 March 2006

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
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